AMENDMENTS

Please amend the following claims as follows, wherein strikethrough denotes deletions and underlining denotes additions.

1. (Currently Amended) A system for automatically routing power in an integrated circuit, the system comprising:

memory for storing data defining a representation of an integrated circuit having a power contact and a power connection; and

logic configured to analyze the data and determine a first location of the power contact and a second location of the power connection based on the data, the logic further configured ~~and~~ to automatically route power from the power connection to the power contact.

2. (Original) The system of claim 1, wherein the data defines a design block of the integrated circuit, the design block comprising the power contact.

3. (Currently Amended) A system for automatically routing power in an integrated circuit, the system comprising:

memory for storing data defining a representation of an integrated circuit having a power contact and a power connection; and

logic configured to analyze the data and to automatically route power from the power connection to the power contact, wherein the data defines a design block of the integrated circuit, the design block comprising the power contact, and ~~The system as~~

~~claimed in claim 2,~~ wherein the data further comprises boundary box data defining a region that comprises a plurality of signal routes.

4. (Original) The system as claimed in claim 3, wherein the logic is further configured to automatically route power from the power connection to the power contact thereby circumventing the region defined by the boundary box data.

5. (Original) A system for automatically routing power in an integrated circuit, the system comprising:

a dataset indicative of the characteristics of a design block corresponding to an integrated circuit (IC); and

logic configured to extract from the dataset a first value indicative of a location of the design block and a second value indicative of a second location of one power contact, the logic further configured to automatically design routing of power to the one power contact based upon the first value and the second value.

6. (Original) The system of claim 5, wherein the dataset comprises a subset of data indicative of a metal interconnect layer, the subset of data comprising a third value indicative of a boundary box defining a region that is reserved for signal routing within the design block.

7. (Original) The system of claim 6, wherein the logic is further configured to design a route circumventing the boundary box defining the region that is reserved for signal routing within the design block.

8. (Currently Amended) A system for automatically routing power in an integrated circuit, the system comprising:

means for storing data defining a representation of an integrated circuit having a power contact and a power connection;

means for analyzing the data; ~~and~~

means for defining a design block of the integrated circuit, the design block comprising the power contact;

means for defining boundary box data defining a region that comprises a plurality of signal routes; and

means for automatically routing power from the power connection to the power contact based upon the design block and boundary box defined.

9. (Original) A computer program for automatically routing power in an integrated circuit, the computer program being embodied on a computer-readable medium, the program comprising:

logic for storing data defining a representation of an integrated circuit having a power contact and a power connection;

logic for analyzing the data to determine the location of a power connection and a power contact;

logic for automatically routing power from the power connection to the power contact; and

logic for creating a representation of the power routing.

10. (Original) A method for automatically routing power in an integrated circuit, the method comprising the steps of:

extracting from a dataset comprising a plurality of values indicative of a design of an IC design block a first value indicative of a location of the design block and a second value indicative of a second location of a power contact within the design block; and

automatically designing routing to provide power to the power contact based upon the first value and the second value.

11. (Original) The method of claim 10, wherein the dataset comprises a subset of data indicative of a metal interconnect layer, the subset of data comprising a third value indicative of a boundary box defining a region that is reserved for signal routing within the design block.

12. (Original) The method of claim 11, further comprising the step of designing power routing circumventing the boundary box defining the region that is reserved for signal routing within the design block.

13. (Original) A method for automatically routing power in an integrated circuit, the method comprising the steps of:

storing data defining a representation of an integrated circuit having a power contact and one power connection;

analyzing the data to determine the location of the power connection and the power contact;

automatically routing power from the power connection to the power contact; and

creating a representation of the power routing.

14. (Original) The method of claim 13, wherein the data defines a design block of the integrated circuit, the design block comprising the power contact.

15. (Original) The method of claim 14, wherein the data further comprises boundary box data defining a region that comprises a plurality of signal routes.

16. (Original) The method of claim 15, further comprising the step of automatically routing power from the power connection to the power contact and circumventing the region defined by the boundary box data.

17. (Original) The method of claim 14, wherein the analyzing step further comprises the steps of:

extracting a first set of values from the data indicative of a first location of the design block in the integrated circuit;

extracting a second set of values from the data indicative of a second location corresponding to the power contact; and

extracting a third set of values from the data indicative of a third location corresponding to a boundary box.

18. (Original) The method of claim 17, wherein the integrated circuit comprises a plurality of metal interconnect layers and a transistor layer and the design block encompasses a portion of the transistor layer and one of the plurality of metal interconnect layers located adjacent to the transistor layer.

19. (Original) The method of claim 18, further comprising

designing a power route connecting the plurality of metal interconnect layers based upon the location of the design block; and

designing the power route to connect the plurality of metal interconnect layers to the power contact of the design block based upon the location of the power contact and the location of the boundary box.

20. (New) The system of claim 1, wherein the logic is further configured to select the first location for the power contact based on a least one signal route defined by the data.